

What is Claimed Is:

1. A semiconductor system (200) having a pn transition, particularly a diode, which is formed as a chip (10) having an edge region, the chip including a first layer (2) of a first conductivity type and a second layer (1) of a second conductivity type opposite to that of the first conductivity type; the first layer (2) having an edge region (2a) and a center region (2b), the pn transition being provided between the first layer (2) and the second layer (1), wherein the second layer (2) is more weakly doped in its edge region (2a) than in its center region (2b), and the boundary surface (12) of the pn transition is non-parallel to the main chip plane (13) at the edge region (2a).
2. The semiconductor system (200) as recited in Claim 1, wherein the boundary surface (12) of the pn transition is provided with a positive beveling angle at the edge region (2a).
3. The semiconductor system (200) as recited in Claim 1 or 2, wherein the boundary surface (12) of the pn transition is curved at the edge region (2a).
4. The semiconductor system (200) as recited in one of the preceding claims, wherein the thickness of the chip (10) is less at the edge region (2a) than in the center region (2b).
5. A method for manufacturing a semiconductor system (200) as recited in one of the preceding claims, wherein the first layer (2) is manufactured using patterned doping.
6. The method as recited in Claim 5, wherein the patterned doping is provided by precoating the chip (10) with dopant, subsequently removing the coating in a

sub-region (7) of the chip (10), and a subsequent introduction of the dopant into the chip (10).

7. The method as recited in Claim 5 or 6,  
wherein the coating is removed by sawing, the sawing being performed, in particular, by a diamond saw or by water-supported laser cutting.

8. The method as recited in Claim 5,6 or 7,  
wherein the chip (10) is precoated with dopant, using APCVD deposition of a doped glass,  
or using a doping film, or using gas phase coating, or using ion implantation, or by applying doping pastes.